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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/512,106

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David A Akerman

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EXAMINER

DUONG, THANH P

ART UNIT

PAPER NUMBER

1797

NOTIFICATION DATE

DELIVERY MODE

11/18/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

pat-dept@quarles.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/512,106	<b>Applicant(s)</b> AKERMAN ET AL.	
	<b>Examiner</b> TOM P. DUONG	<b>Art Unit</b> 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 27, 29, 31, 36-43, 45-50 and 53 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 27, 29, 31, 36-43, and 45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

Applicant's remarks and amendments filed on July 7, 2009 have been carefully considered. Claims 27, 29, and 46 have been amended. Claims 1-26, 28, 30, 32-35, 44, 51-52, and 54-55 have been canceled. Claims 27, 29, 31, 36-43, 45-50, and 53 are pending in this application.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 27, 29, 31, 36-43, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al. '671 in view EP 1247559 (hereinafter EP '559).

Regarding claim 27, Saito et al. discloses a filter element comprising a composite homogenous structure of inorganic fibers and a catalyst (Col. 1, lines 20-34 and Col. 2, lines 37-41), wherein the filter element is a hollow, candle shaped filter element, closed at one end (Col. 3, lines 10-18).

With respect to the filter element formed by "a process of injection-molding" Saito et al. does not disclose such process; however, such limitation is a product-by-process limitation, and product-by-process claim is the same or obvious from a product of the

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prior art, the claim is unpatentable even through the prior product was made by a different process. *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Saito is silent with respect to the filter element has a porosity of more than 70-80%.

EP '559 teaches that it is desirable to provide a filter element with the porosity range of the claimed invention (sections 0008 and 0016) and such configuration provides the benefit of retaining a large amount of the oxidation catalyst, acid gas reactant, and activated carbon powder.

Thus, it would have been obvious in view of EP '559 to one having ordinary skill in the art to modify the device of Saito et al. with the porosity range as taught by EP '559 in order to gain the above benefit.

Regarding claims 29 and 31, Saito et al. discloses the inorganic fibers of the instant claims (Col. 3, lines 62-66).

Regarding claims 36 and 39, Saito et al. discloses the precious metal (Col. 3, lines 40-55).

Regarding claim 37, Saito et al. discloses the precious metal is supported on a metal oxide particles (Table 3).

Regarding claim 38, it appears that Saito et al. discloses the precious metal or metal oxide with 0.1-1.0% of the mass of the reactant (Col. 5, lines 28-30) at most thru routine optimization.

Regarding claims 40-42, Saito et al. discloses the binder system of colloidal dispersion and modified starch (Col. 4, line 65 - Col. 5, line 8).

Regarding claim 43, Saito et al. discloses the flocculant of the instant claims (Col. 5, lines 1-8).

Regarding claim 45, Saito et al. discloses the amount of catalyst can be varied (Col. 5, lines 20-30). Therefore, it would have been obvious in view of Saito et al. '671 to one having ordinary skill in the art to optimize the amount catalyst and filter mass including the claimed catalyst and filter mass in order to provide the catalyst composition with a higher catalytic activity, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art (*In re Boesch*, 617 F.2d. 272, 205 USPQ 215 (CCPA 1980) and (*In re Allen* 105 USPQ 233). Note, Applicants have not shown criticality of the claimed mole ratio. Note, the normal desire of scientists or artisans to improve upon what is already known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages", *In re Peterson*, 65 USPQ2d 1379 (CAFC 2003).

### ***Response to Arguments***

Applicant's arguments with respect to claims 27, 29, 31, 36-43, 45-50, and 53 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TOM P. DUONG whose telephone number is (571)272-2794. The examiner can normally be reached on 8:00AM - 4:30PM (IFP).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on (571) 272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tom P. Duong/  
Primary Examiner, Art Unit 1797